

# ABSTRACT OF THE DISCLOSURE

A precoding-multiplexing circuit is formed by a precoding circuit for carrying out a precoding with respect to  $n$  sets of parallel input binary data signals having a bit rate equal to  $R/n$ , to obtain  $n$  sets of parallel precoded signals, and a time division multiplexer for time division multiplexing the parallel precoded signals obtained by the precoding circuit, in units of one bit, and outputting time division multiplexed output signal having a bit rate equal to  $R$ . In this configuration, the encoding is realized by processing electric signals before the time division multiplexing, so that it becomes possible for the precoding circuit to handle signals which are slower than the transmission rate, and therefore it becomes easier to realize the higher transmission rate.